SITE:	Mouth of Harbor Channel, Richmond Unocal Arco Time Oil GATX Castrol Texaco	LATITUDE:	37-54.9
HAZARD:	Facility	LONGITUDE:	122-21.5
VOLUME:	800/3,800 bbl		
DURATION:	3 days		

TRAJECTORY ANALYSIS:

A spill trajectory envelope was calculated for several facilities located at the mouth of Harbor Channel in Richmond. The trajectory analysis predicted the movement and spreading of a spill released into the water near the shoreline at the northern end of the harbor channel in Richmond. The analysis considered oil transport by the wind and tidal currents, and spreading of the oil spill by physical processes such as gravity, surface tension, and tidal dispersion. Spill transport on an ebbing tide would be expected to move the oil from the harbor mouth at Richmond through the Golden Gate and out of San Francisco Bay. A spill during the flood tide would be expected to transport the oil into San Pablo Bay. During this time physical spreading of an 800 bbl spill would cause the spilled material (in this vegetable oil) to be moved northward approximately 2 miles into San Pablo Bay or westward from the Golden Gate. Spreading of the larger 3,800 bbl spill over 3 days could transport the oil approximately 2 miles farther.

Wind-induced surface currents could cause additional transport of oil depending on the direction, strength, and persistence of local winds. Northerly winds, combined with physical spreading, could transport the oil southward into South San Francisco Bay as far as the San Mateo Bridge. Within 3 days, westerly and southwesterly winds could move the oil across San Pablo Bay and through the Carquinez Straits and approximately 5 miles eastward into Suisun Bay. Because of the relatively small size of the spills from these facilities, no significant amounts of oil are expected to be transported outside of San Francisco Bay.

These spill trajectory envelopes represent the outer perimeter of shoreside areas that could receive oil in the event of any spill. The envelopes are based on regional extremes of climate, tide, current, and wind and assume pessimistic dispersion and other adverse weather conditions. These trajectory envelopes do not represent the trajectory of any one spill. A full discussion of the details used for preparing these spill envelopes is provided in Section 202.2.